

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-13-41  
Relating to Certification of New Motor Vehicle Engines

CATERPILLAR TRACTOR CO.

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102, and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Caterpillar Tractor Co. 1985 model-year heavy-duty diesel engines have shown compliance with the optional transient standards and are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
FCT0636EPA7	636 (10.4)	Engine Modifications (Air Fuel Ratio Controller) (Diesel Injection - Direct) (Turbocharger)
FCT0638FPA7	638 (10.5)	Engine Modifications (Air Fuel Ratio Controller) (Diesel Injection - Prechamber) (Intercooler) (Turbocharger)
FCT0893FPA7	893 (14.6)	Engine Modifications (Air Fuel Ratio Controller) (Diesel Injection - Direct) (Intercooler) (Turbocharger)

Engine models and codes are listed on attachments.

The following are the certification emission values for this engine family:

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>
FCT0636EPA7	1.2	2.3	4.5
FCT0638FPA7	0.5	1.7	4.6
FCT0893FPA7	0.4	2.4	5.1

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BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order.

Executed at El Monte, California this 5<sup>th</sup> day of December, 1984



K. D. Drachand, Chief  
Mobile Source Division

## ABBREVIATIONS

CCV-Combustion Chamber Valve  
CFI-Central Fuel Injection  
DID-Diesel Injection-Direct  
DIP-Diesel Injection-Prechamber  
MFI-Mechanical Fuel Injection  
TC -Turbocharged  
IC -Intercooler  
AFRC-Air Fuel Ratio Controller

CFI, CL, DID, DIP, EFI, MFI  
nV -nVenturi Carburetor  
VV -Variable Venturi

3406 - Code J

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HEAVY-DUTY DIESEL ENGINES

Manufacturer CATERPILLAR TRACTOR CO.

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Engine Family FCT0636EPA7

CID(Liter)-Type 636(10.4) V8

ECS and (Special Features) EM (TC, DID, AFRC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM (TORQUE)	Fuel Rate at Maximum HP mm <sup>3</sup> /stroke	Label Ident.
3208	CATERPILLAR	CATERPILLAR	(590 @ 1400) 225 @ 2600	(92) 79	LABEL INFORMATION WILL BE PROVIDED WHEN THEY ARE DESIGNED.
CODE B	4W5868	4W7016	(550 @ 1400) 210 @ 2600	(83) 72	
			(560 @ 1400) 200 @ 2200	(84) 76	
			(500 @ 1400) 175 @ 2200	(75) 67	
	<u>TURBOCHARGER</u> 7W2874 7W2876				

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Manufacturer CATERPILLAR TRACTOR CO. Page 2B  
 Engine Family FCT0638FPA7 CID(Liter)-Type 638(10.5) 16  
 ECS and (Special Features) EM (TC, IC, DIP, AFRC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM (TORQUE)	Fuel Rate at Maximum HP mm <sup>3</sup> /stroke	Label Ident.
3306	CATERPILLAR  7W0279	CATERPILLAR  9N2845	(775 @ 1400) 270 @ 2200	(174) 151	LABEL INFORMATION WILL BE PROVIDED WHEN THEY ARE DESIGNED.
			(775 @ 1400) 270 @ 2100	(174) 157	
			(810 @ 1400) 245 @ 2200	(181) 137	
			(810 @ 1400) 245 @ 2100	(181) 138	
	TURBOCHARGER 9N1287 9N1289				

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HEAVY-DUTY DIESEL ENGINES

Manufacturer CATERPILLAR TRACTOR CO. Page 2C  
 Engine Family FCT0893FPA7 CID(Liter)-Type 893(14.6) 16  
 ECS and (Special Features) EM(DID, TC, IC, AFRC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM (TORQUE)	Fuel Rate at Maximum HP mm <sup>3</sup> /stroke	Label Ident.
3406  CODE H	CATERPILLAR  4W2551	CATERPILLAR  4W7018	(1145 @ 1200) 300 @ 2100	(232) 165	LABEL INFORMATION WILL BE PROVIDED WHEN THEY ARE DESIGNED.
			(1145 @ 1200) 300 @ 1800	(232) 186	
			(1145 @ 1200) 280 @ 1600	(232) 189	
	TURBOCHARGER 4W4537 4W4538  CATERPILLAR  7L0007    TURBOCHARGER 4W5188 4W5189	CATERPILLAR  4W7018	(1325 @ 1260) 400 @ 2100	(264) 205	
			(1395 @ 1260) 400 @ 2100	(279) 238	
			(1325 @ 1260) 380 @ 1800	(264) 221	
			(1325 @ 1260) 360 @ 1800	(264) 210	
			(1325 @ 1260) 340 @ 1700	(264) 211	

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